



## PLAY-BASED STEM EXHIBIT ENGAGEMENT OBSERVATION TOOL

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Date: \_\_\_\_\_ Exhibit title: \_\_\_\_\_ Start time: \_\_\_\_\_ # of children at exhibit / in social group: \_\_\_\_\_ / \_\_\_\_\_

Observer: \_\_\_\_\_ End time: \_\_\_\_\_ # of adults in social group: \_\_\_\_\_

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### CHILDS ACTIONS

- Child is observing or experiencing STEM phenomena. Name or describe the phenomenon:  
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  - Child is playing with a **game** or is playing a game
  - Child is playing with **objects** that can be picked up and moved
  - Play where the child is exploring and processing information through **kinesthetic** activities.
  - Play where the child is experiencing and processing information through their **senses**.
  - Play where the child engages in pretend, **imaginative**, fantasy, or play that involves alternate realities.
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### SOCIAL CONTEXT OR ACTIONS

- Play is with someone else; interactive or **jointly** experienced.
- Play is not with someone else. The child watches others play as an **onlooker** or is playing independently alongside or **parallel** to an adult or peer.

## ROLE OF ADULTS

- Adult is **supporting** the child's interaction with the exhibit, acting as an audience.
  - Adult is **modeling** how to engage with the STEM phenomenon through STEM practices.
  - Adult is providing **inquiry** prompts to guide engagement. These are questions, not statements.
  - Adult is **directing** interactions with the exhibit or engagement with practices, showing the child how and what to do.
  - Adult is **explaining** what is happening at the exhibit or what is happening because of engagement.
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## STEM PRACTICES AT PLAY

*THE CHILD ALONE OR WITH OTHERS IS:*

- Using **observations** or experience with phenomena and systematically applying observations, experiences, or evidence of phenomena.
  - Systematically **testing** variables based on observations or experience with the phenomena
  - Designing** solutions by generating ways to solve a problem.
  - Revising** or making a change to design, implementation, rebuilding in a different form, or repeating to test.
  - Using **evidence** or making arguments to make a claim or suggesting a solution supported by evidence (e.g., from their observations) and describing how the evidence supports the claim.
  - Communicating STEM** information to others around them (can be multiple modalities)
  - Asking questions** about a STEM phenomenon.
  - Making **predictions** or a guess about what will happen based on observations or prior experience/knowledge. This should be explicit with direct evidence.
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## OBSERVATION DETAILS

*USE THIS SPACE TO NOTE WHAT YOU OBSERVE AND OTHER RELEVANT INFORMATION.*

